ENVIRONMENT

Overview

Florida's economy is connected to the environment in every aspect. Without clean air, without clean beaches and shores, without pristine and well-stocked lakes and rivers, without an ample supply of safe drinking water, and without high quality agricultural products such as cattle, citrus, and vegetables, Florida cannot develop and maintain its reputation as a prime destination for industry, tourism, and business. Most importantly, without a continued commitment to preserve, protect and enhance its natural systems, Florida's environment will not support the state's growing population.

Florida has a total area of 58,560 square miles–54,252 square miles of land and 4,308 square miles of water. The state has 663 miles of beaches, 27 first-magnitude springs, and 3 million acres of wetlands. Outside of the Great Lakes, Florida is home to the largest freshwater lake in the continental United States. Lake Okeechobee is about 760 square miles in size, and flows into one of the world's greatest natural wonders – the Everglades, commonly referred to as the "River of Grass." The Everglades, now about one-third of its original size, once covered most of the southern half of the Florida Peninsula. Water that overflowed from Lake Okeechobee was purified as it passed through the "River of Grass" before soaking into the aquifer to replenish the state's natural water supply, and emptying into the salty Florida Bay and Biscayne Bay, which are dependant on those purified waters to control salinity for fishery habitat.

In Florida, agriculture is big business. With approximately 10 million acres in production in 1998, Florida's farmers produced 20 percent of the nation's vegetables, ranked first in citrus production, and sold more than $6 billion worth of agricultural products. Such large-scale production requires consumption of great amounts of water. In fact, agriculture represents the largest single water user category in the state. Conversely, these same production lands are also valuable water recharge areas. Statewide, farmers in Florida are implementing best management practices (BMPs) in an effort to assist in protecting the environment and water resources. Some BMPs now being utilized include reuse of water for irrigation purposes, less acreage being planted, and better use of fertilizers to reduce nutrient content and runoff.

Florida's nationally recognized land acquisition program has been a major factor in protecting the environment. Within the Everglades Agricultural Area, agricultural lands have been purchased and taken out of production. Programs like Save our Rivers and Preservation 2000 have provided for the acquisition of more than 3 million acres of land, including property fronting rivers and shorelines. A dedicated funding source provides for the control and replenishment of beaches eroded by hurricanes and development. The Department of Environmental Protection (DEP) and the Fish and Wildlife Conservation Commission are actively purchasing recreation lands. Better management of state lands increases recreational opportunities for residents and visitors alike.

Florida's five water management districts (WMDs) are developing programs to replenish and enhance natural water supplies. Lands purchased with state funding will be used to develop and hold alternative sources and supplies of water. Aquifer recovery and storage, reverse osmosis

plants, and aboveground reservoirs help supply water to areas of the state facing critical shortages.

The newly implemented Florida Forever Program provides for coordinated efforts in land restoration. Further, the state and the federal government are partnering to restore the Everglades. Agriculture is protecting the state's resources and maintaining a safe and plentiful food supply for its citizens. Florida's Legislature remains committed to a healthy economy and a healthy environment.

BROWNFIELDS REDEVELOPMENT

Introduction

Broadly defined, "brownfields" are abandoned, idled, or underused industrial and commercial properties where expansion or redevelopment is complicated by environmental contamination. Nationally, brownfields represent an enormous waste of resources. It has been estimated that there are from 100,000 to 450,000 brownfield sites nationwide. Federal, state, and local environmental laws have unwittingly contributed to the creation and expansion of brownfields. Because of the cost of cleaning up a contaminated site and the potentially serious liability issues, it has been easier and more cost-effective for developers to ignore these abandoned, generally urban sites, in favor of developing open greenspace areas, even though many of the sites in a brownfield area may actually contain little or no environmental contamination.

Summary of Legislative Action Taken

Florida's Brownfield Redevelopment Act was created in 1997 (chapter 97-277, Laws of Florida) and subsequently amended in 1998 (chapter 98-75, Laws of Florida) and 2000 (chapter 2000-317, Laws of Florida) to encourage the reuse and redevelopment of brownfield sites. In addition, the act provided a framework for the state's brownfields program to facilitate site redevelopment, clean-up, and protection of the public health and the environment.

Implementation

DEP is responsible for the development and implementation of the brownfields program. To date, a series of administrative actions has been undertaken, including negotiating agreements with the U.S. Environmental Protection Agency (EPA). These agreements specify criteria under which the EPA will forego oversight at brownfield sites.

A Brownfields Clean-up Criteria Rule was adopted in July 1998, and subsequently amended in 1999. The rule establishes clean-up standards and procedures that utilize cost-effective, risk-based corrective action principles to protect human health and safety and the environment.

In 1998, a Voluntary Clean-up Tax Credit was created for taxpayers voluntarily participating in the clean-up of a brownfield site in a designated brownfield area. The Voluntary Clean-up Tax Credit rule was adopted in March 1999 to implement these provisions.

Significant features of the Brownfields Redevelopment Act include emphasis on redevelopment and economic incentives to encourage the private sector to redevelop blighted urban properties. Economic incentives offered by state and local governments include financial, regulatory, and technical assistance. Also, brownfield redevelopment bonus refunds of $2,500 are available to qualified target industry businesses that create Florida jobs in a brownfield.

Local governments are designated for key roles in identifying parcels to be included in a brownfield area. An important component of this process is the formation of an advisory committee to improve public participation and to receive public comment on rehabilitation and redevelopment of the designated brownfield area, on future land use, on local employment opportunities, on community safety, and on environmental justice.

Results and Impact

The number of designated brownfield areas in Florida increased from 3 in 1998 to 25 in 1999. These designated areas encompass over 54,000 acres of contaminated and uncontaminated properties including residential and viable business properties. Additionally, the DEP has projected that up to 22 additional brownfield area designations may occur during 2000. DEP also reports that as a result of the bonus refund, 1,298 direct jobs and 1,546 indirect jobs have been created and $41 million in new capital investments have been realized.

APPLICATION OF RISK-BASED CORRECTIVE ACTION PRINCIPLES TO ENVIRONMENTAL CLEAN-UPS

Introduction

Risk-based Corrective Action (RBCA), or "Rebecca" (as it is commonly referred to) represents a balanced, pragmatic approach to the clean-up of contaminated sites. RBCA was created in the mid-1990s as a result of the discovery by the state, insurers, and private industry of a lack of necessary resources to finance clean-ups meeting the stringent levels required by regulatory programs. The American Society for Testing and Materials (ASTM) undertook the development of a standardized process for making risk-based decisions at contaminated sites to allocate limited resources to high-risk sites.

The standard adopted by ASTM describes a framework, or philosophy, by which regulatory agencies can develop risk-based guidance. This standard was adopted by the EPA, first for use in petroleum storage tank clean-ups, and then for other types of contamination clean-up programs.

RBCA involves a process for managing contamination clean-up on a site-specific basis and is defined as a streamlined approach in which exposure and risk assessment practices are integrated with traditional components of the clean-up process. The purpose is to ensure that appropriate and cost-effective remedies are selected and that limited resources are properly allocated.

The RBCA process includes three goals: to ensure protection of human health and the environment, to be practical and cost-effective, and to provide a consistent and technically

defensible clean-up process. Under this approach, decisions related to resource allocation, urgency of response, target clean-up levels, and remedial measures are based on current and potential risks to human health and the environment.

RBCA can result in overall cost savings because, as opposed to a one-size-fits-all approach to site clean-up, RBCA involves site-specific decision-making designed to achieve desired levels of clean-up. Also, RBCA can be used to group sites within ranges of high, medium, and low risk so that all sites can progress toward clean-up completion while limited resources can be directed at the highest risk sites.

Summary of Legislative Action Taken

Florida's adoption of RBCA dates back to the mid-1990s. It is codified in the petroleum underground storage tanks program (chapter 96-277, Laws of Florida), dry cleaning rehabilitation program (chapters 95-239, 96-321, and 96-410, Laws of Florida), and the brownfield redevelopment act (chapter 97-277, Laws of Florida).

Implementation

The DEP administers the state RBCA program. Rules have been adopted that establish minimum clean-up standards, provide for site prioritization, and allow for the determination that no further action is needed at a site. Since its original implementation, five core issues remain concerning the use of the RBCA process and any future expansion of the approach to cover other clean-up scenarios.

The "Point of Compliance" is the point at which contaminated land or water must meet applicable clean-up standards. The "Point of Exposure" is the point at which contaminants reach a human or environmental receptor. "Institutional Controls" are administrative or legal tools utilized to prevent future uses of soil and groundwater at a contaminated site where there is potential for human or environmental exposure to those contaminants. "Engineering Controls" use engineered systems to protect human health and the environment from contact with contaminated soil or groundwater. Finally, "Risk-Based Screening Levels" are the levels of contaminant concentration that establish parameters for site clean-up standards.

The state has adopted the following minimum clean-up standards to be applied at a point immediately adjacent to the point of exposure: applicable state standards if they exist; calculations using a life-time cancer risk level of 10 to the minus 6 (one in one million); a hazard index of 1 or less; the best achievable detection limit; the naturally occurring background concentration; or nuisance, organoleptic (relating to perception by a sensory organ), and aesthetic considerations.

Results and Impact

The use of RBCA in the state has directed resources to those sites that pose the highest risk to human health or the environment. Cost savings are being realized because clean-ups are now

based on risk. In addition, the use of institutional and engineering controls has allowed sites to be quickly released from clean-up programs and the property put back into productive use.

PUBLIC LAND ACQUISITION PROGRAMS: PRESERVATION 2000 TO FLORIDA FOREVER

Introduction

Florida began acquiring lands for public use in the 1920s, but had no formal land-buying program until the 1960s. The Legislature established a $20 million bond program to acquire lands for outdoor recreation in 1964, followed 4 years later by an additional $40 million bond program to acquire more outdoor recreational lands. In 1972, the Legislature created the Environmentally Endangered Lands program. A state referendum later that year approved a $240 million bond issue, most of which was earmarked to acquire environmentally sensitive lands.

Subsequent land buying programs relied on either bond issues or earmarked general revenue funds. In 1979, the Conservation and Recreations Lands (CARL) program was created by the Legislature to acquire and manage public lands, conserve and protect environmentally unique and irreplaceable lands and lands of critical state concern. Documentary stamp tax revenues, an annual $10 million general revenue fund transfer, and lease fees remain the primary sources of revenue for the CARL program, which in recent years received between $45 million and $55 million.

In 1981, the Legislature created two additional land acquisition programs. The Save Our Coast program, funded with $250 million in bond proceeds, was aimed at acquiring beachfront properties to protect them from development. This program has expired and bonds have been retired. Water management district acquisition of buffer areas along surface water bodies was the original purpose of the Save Our Rivers program, but over the years the program has been expanded to include all types of land acquired by the districts. The Save Our Rivers program is funded from documentary stamp tax revenues with current funding totaling $55 million.

Summary of Legislative Action Taken

The funding levels of the early programs, although significant for their time, are pale in comparison to the Florida Preservation 2000 (P2000) program. The P2000 is a 10-year, $3 billion program to acquire environmentally significant lands for preservation, conservation and recreational purposes. Bonds finance the acquisition program, and debt service is paid from documentary stamp proceeds. By all accounts, it remains the largest state-funded land acquisition program in the nation. The agencies receiving P2000 bond proceeds will spend down P2000 balances over the next 2 years.

In response to the expiration of the P2000 program, the Legislature enacted the Florida Forever program (chapter 99-247, Laws of Florida) during the 1999 Regular Legislative Session. This program authorizes the issuance of bonds in an amount not to exceed $3 billion for acquisition of land and water resources. This revenue is to be used for restoration, conservation, recreation,

water resource development, historical preservation, and capital improvements to land and water areas. The program will provide for environmental restoration, enhance public access and recreational enjoyment, promote long-term management goals, and facilitate water resource development. The first bond series for the Florida Forever program is scheduled in the 2000-2001 fiscal year.

Bond revenue from the Florida Forever program will be allocated annually as follows: 35 percent to the DEP for land acquisition and capital projects; 35 percent to the WMDs for land acquisition and capital project expenditures necessary to implement their priority project; 24 percent to the Florida Communities Trust program; 1.5 percent for purchases of inholdings and additions to state parks; 1.5 percent to fund state forest inholdings and additions, and implement reforestation plans or best management practices; 1.5 percent to the Fish and Wildlife Conservation Commission; and 1.5 percent to the Florida Greenways and Trails Program.

Implementation

Both P2000 and the Florida Forever program are administered by several agencies, each with expertise in acquiring and managing specific land types. Funds appropriated to the DEP for acquisition of conservation and recreation lands are spent on lands identified in a priority list compiled by the Acquisition and Restoration Council (formerly called the Land Acquisition and Management Council). The Council consists of representatives from various state agencies who review and rank eligible projects. The Governor and Cabinet then approve the project list, commonly referred to as the CARL list.

Funds appropriated to the WMDs are spent on Save Our Rivers projects that are ranked and approved by the governing boards of the districts. Funds appropriated from the Florida's Communities Trust program are spent on projects ranked by an independent Board of Trustees.

Results and Impact

Since its creation, the P2000 program has provided $3 billion for environmental and recreational land acquisition. Nearly $2 billion of the available funds have been spent to acquire in excess of 1 million acres. Approximately one-half of the unspent funds are currently encumbered or earmarked for project acquisitions.

WATER RESOURCE/WATER SUPPLY DEVELOPMENT

Introduction

Prior to the 1950s, single-purpose special districts handled water management activities in Florida. Concerned that this fragmented approach to water management was not effective in dealing with Florida's future needs, the 1955 Legislature created the Florida Water Resources Study Commission. Based on the commission's recommendations, the Legislature passed the state's first significant water law, the Florida Water Resources Act of 1957, which created the precursor to the present-day consumptive use permit program and allowed the state to mandate water conservation.

In 1972, the Legislature passed a Water Resources Act creating the water-management administrative structure that is in place today. The 1972 Act, based in part on a Model Water Code developed at the University of Florida, established a two-tiered approach to water management. The DEP administers state water policy while five WMDs (WMDs) perform the day-to-day implementation of water law. WMD activities include issuing consumptive use permits for water withdrawals, environmental resource permits (ERPs) for construction in wetlands activities, and well-drilling permits; acquiring lands for water-related purposes; building and operating flood-control projects; establishing minimum flows or levels for public water bodies; and restoring degraded water bodies. These activities are funded through a combination of state, federal, and local resources.

The 1972 act remained substantially unchanged until the early 1990s when state policy makers began rethinking Florida water policy in light of urbanization patterns and population growth. According to the U.S. Census, Florida's population nearly doubled over a 20-year period growing from 6.7 million residents in 1970 to 12.9 million in 1990. Today, Florida's population is estimated at more than 15 million residents.

The Governor, the Speaker of the House of Representatives, and the Senate President appointed members to the Water Management District Review Commission in 1994 to evaluate the effectiveness of the current system. The Commission's findings were submitted to the executive and legislative branches in December 1995, but resulted in minimal changes in state water policy.

In the 1994-1996 biennium, the House created a Select Committee on Water Policy to review Florida's existing water policy. In 1996-1997, the Governor appointed a task force to focus on promoting and paying for water resource and water supply development projects in Florida. The task force proposed a number of statutory changes that were incorporated into the 1997 legislation summarized below, but its funding recommendations were not adopted.

More than 40 years since the first Water Resources Study Commission was established, saltwater intrusion is still affecting Florida's water resources. Further, the public demand for water, particularly in the heavily populated southern half of the state, has created a huge strain on Florida's aquifers and rivers. The state's natural water supply is being used faster than nature can replenish it.

Summary of Legislative Action Taken

In 1997, the Legislature passed comprehensive state water policy legislation. Water resource and water supply development were emphasized as the way to ensure adequate water supplies for current and future users, and to protect natural systems. Development of water resources is a designated responsibility of the WMDs, while water supply development remains the primary responsibility of public and private utilities, regional water supply authorities and local governments. The WMDs also must adopt 20-year regional water supply plans for areas where shortages are occurring or are expected to occur, and which local governments and others can use as a planning tool.

The 1997 law also required WMDs to initiate development of minimum flows and levels for ground and surface waters, meaning the point at which additional withdrawals from a water body would cause significant harm to the resource. WMDs were directed to implement a recovery or prevention strategy for any water body that has fallen below, or is expected within 20 years to fall below, its minimum flows and levels. Also, the WMDs were given flexibility not to adopt minimum flows and levels on water bodies where restoration is not practicable or feasible, or on water bodies altered by natural or manmade activities so that historic hydrologic functions cannot be restored.

Finally, the legislation provided major changes to the West Coast Regional Water Supply Authority, now called Tampa Bay Water, the public water supplier for Hillsborough, Pasco and Pinellas counties, and their key municipalities. It also helped formalize an agreement between the Authority and the Southwest Florida WMD to enter into a partnership to jointly develop alternative water supplies for the Northern Tampa Bay area. Southwest Florida WMD has committed $183 million, from 1995-2007, for qualified water supply projects for the Authority.

Implementation

The South Florida WMD, the Southwest Florida WMD and the St. Johns River WMD have completed several regional water supply plans that are being reviewed and approved by their governing boards. The Northwest Florida WMD's one regional water supply plan, for the Santa Rosa-Walton county area, is expected to be completed in the Fall of 2000. The Suwannee River WMD is not required to draft a regional water supply plan because it identified no areas with projected water shortages in the next 20 years. The plans include actual and projected use data, discussions of current water resource development projects of each WMD, and recommendations of the types of projects that could be permitted for water resource or water supply development.

In addition, the WMDs have accelerated development of minimum flows and levels for lakes, rivers and other water sources. This is an important first step in planning water resource/water supply development. Knowing a waterbody's minimum flow or level helps water managers determine how much water can be withdrawn from an existing source before negative environmental impacts occur, and thus alternative water supplies have to be developed. The goal is to link the minimum flows and levels of key water bodies to the relevant regional water supply plan.

As for the specific partnership agreement between Tampa Bay Water and the Southwest Florida WMD, the money continues to accrue in escrow as the Authority moves forward on approved projects, such as the desalination treatment plant near Apollo Beach in Hillsborough County.

Results and Impact

It is too soon to determine the impact of state water policy legislation, because water resource and water supply projects are long-term endeavors. A better picture will emerge over the next six months as the WMDs formally adopt regional water supply plans and release their minimum flows and levels rules for specific water bodies. The Tampa Bay Water/Southwest Florida

WMD partnership plan projects are more problematic because of opposition by certain citizens and groups to the location of the desalination plant and other proposed projects.

TOTAL MAXIMUM DAILY LOADS

Introduction

The federal Water Pollution Control Act of 1972, commonly referred to as the Clean Water Act (CWA), established the framework for pollution control in the nation's water bodies. Its goal was "fishable and swimmable water for every American." By establishing national standards and regulations for pollution discharge, the CWA sought to restore and protect the health of the nation's water bodies. Pollution could no longer be discharged without a permit, the use of best available technologies for pollution control was encouraged, and funds for building and improving sewage treatment plants were provided. National water-quality standards were strengthened.

The CWA requires states to provide Congress a biennial report on the water quality of lakes, streams, and rivers. Those waters that qualify as "impaired" must be submitted to the U.S. Environmental Protection Agency. For water bodies designated as impaired, states must develop total maximum daily loads (TMDLs) for each pollutant exceeding the legal limit for that water body. A TMDL is the numeric point at which a water body can no longer assimilate a specific pollutant, and still meet its designated use. Typically, a water body will have several TMDLs – one for each pollutant discharged into it. A TMDL's numeric point is the sum of point source discharges (typically an identifiable point of discharge such as a power plant or wastewater treatment plant), nonpoint source discharges (a source with no identifiable point of discharge such as farms and urban runoff), and the margin of safety (the maximum amount of exposure that produces no measurable effect in animals divided by the actual amount of human exposure in a population). If states fail to develop TMDLs, then the EPA must.

Impaired water body listings and TMDL development were largely ignored for 20 years until lawsuits filed by conservation groups against the EPA brought renewed attention. Florida was one of the 30 states listed by EarthJustice and other environmental organizations in their lawsuits as not having implemented the TMDL provisions. A settlement agreement has been negotiated.

In anticipation of the legal action, DEP in early 1998 submitted a list of impaired water bodies to EPA and initiated TMDL planning. In November 1998, the federal government approved DEP's list. Over a 12-year period TMDLs will be developed and implemented for 711 water segments, representing 590 water bodies. Also, DEP has established TMDLs for Tampa Bay, Lake Thonatosassa, the Halifax River, and the Manatee River, although implementation has been slow because all parties contributing to the pollution are not participating in the proposed clean-up solutions. Further, DEP proposed to develop and implement TMDLs using a basin/watershed approach as a way to incorporate ecosystem management into the process and to alleviate the regulatory burden on individual property owners and industries.

However, DEP was concerned that it did not have express legislative authority to fully implement a TMDL program. Representatives of industries operating to discharge pollutants to

waters using approved permits were also concerned. Industries did not want to obtain additional permits or endure restricted operating conditions to help meet a basin or watershed TMDL if other sources of pollution were not being required to participate. The agricultural industry was concerned about new requirements on farming operations. Business groups and development companies were concerned about how TMDL implementation would affect their interests. These different groups made a commitment to work with the Legislature on a consensus regulatory framework for TMDLs in Florida.

Summary of Legislative Action Taken

In 1999, the Legislature established a regulatory framework for a TMDL program in Florida. The legislation addresses further development of the impaired water body list, and TMDL assessment, calculation, allocation, and implementation. The bill requires that the TMDL process be integrated with existing protection and restoration programs in Florida, such as the Surface Water Improvement and Management (SWIM) program and the Everglades Restudy, and provides for coordination with state agencies and affected parties.

The legislation directs DEP to adopt by rule: a methodology to determine whether a water body should be listed as impaired; a methodology to remove water bodies from the list; the actual TMDLs themselves; and how DEP plans to allocate the TMDL to the pollutant sources. Broad-based technical advisory committees (TACs) will assist DEP with these activities, as will other agencies, local governments and citizens.

Nonpoint source pollution is considered the most significant cause of water degradation in Florida. At this time, there are limited regulatory tools to manage it. The law promotes the use of "best management practices" (BMPs) to reduce pollutants. DEP and the WMDs are authorized to promulgate rules relating to BMPs and other measures necessary to achieve the pollution reduction targets established by the TMDLs for non-agricultural nonpoint sources of pollution. The Department of Agriculture and Consumer Services (DACS) is required to do the same for agricultural nonpoint sources of pollution.

The DEP must report to the Legislature in February 2001 on the status of the TMDL allocation program and make recommendations for improvement. In addition, DEP will document the effectiveness of BMPs used and the effectiveness of implementing TMDLs, and report back to the Legislature by January 2005 with recommendations.

Implementation

In 1999, DEP created a technical advisory committee (TAC) to assist in development of a methodology for determining impaired water bodies. A draft rule has been circulated and final rule adoption is expected by the end of 2000. A second TAC met for the first time in June to begin work on TMDL allocation issues. Its comments and suggestions will be used to draft the February 2001 report.

DEP, the WMDs and DACS have initiated work on the BMPs for nonpoint source pollutant reductions. The WMDs, for example, expect to use data accumulated in the pollutant load reduction goal program in the non-agricultural BMP development.

Agricultural BMP development is being accomplished on a commodity-by-commodity basis with measures being modified and customized to fit needs and conditions within the state's various geographic regions. Agriculture in Florida is very diverse, ranging from beef and dairy cattle to citrus, vegetables, poultry, agronomic crops, tree farming, and ornamental plant production. Areas of the state differ greatly in soil type and amounts of rainfall received, thus requiring development of a variety of BMPs.

In 1994, legislation was passed to protect Florida groundwater from nitrate contamination that was found in 36 of 38 Florida counties tested. The law created a 50 cents per ton assessment on nitrate fertilizer to develop and implement groundwater protection measures. The 1999 TMDL legislation takes some of those concepts and applies them to surface water protection.

Interim measures or BMPs are in various stages of development for aquaculture statewide, for citrus production affecting the St. Lucie estuary, for dairy and poultry in the middle Suwannee River basin, for vegetable and forage grass production in the Suwannee River/North Florida area, and for beef cattle/dairy cattle/vegetable production around Lake Okeechobee. A key component to the success of BMP development and adoption is cooperation, acceptance, and endorsement by the producers of the crop or commodity for which BMPs are being created.

As a result of the Consent Agreement reached with EarthJustice, in December 1999, EPA proposed a TMDL for Lake Okeechobee that has not been adopted as EPA is amenable to allowing the state to develop its own TMDL. A TAC, consisting of most of the researchers dealing with the phosphorous dynamics in Lake Okeechobee, has been working to develop a simplified model to create a defensible TMDL for the lake. The TAC's next meeting in August 2000 will address the biggest outstanding issue—what effect reducing the flow of phosphorus into Lake Okeechobee from external pollutant sources will have on the amount of phosphorus already in the lake.

DEP expects the Lake Okeechobee TMDL to be developed by August 31, 2000. At that time, the formal rulemaking process will begin.

Results and Impact

TMDL development and implementation represents a dynamic and lengthy process. The legislation's impact will likely be better gauged when DEP attempts to allocate the first TMDL. The groups that worked to create the legislation are pleased that Florida has its own program, since EPA is expected to release new draft rules by July that could impose more regulations on nonpoint source polluters.

WETLANDS MITIGATION BANKING

Introduction to Wetlands

In the 1970s, as scientific research confirmed the benefits of wetlands for flood control, water quality, aquifer recharge, and wildlife habitat, the federal and state governments enacted laws to regulate wetland activities. Congress passed three federal laws that included requirements for obtaining permits from the U.S. Army Corps of Engineers to dredge, fill or otherwise disturb wetlands.

Florida law authorizes the state's lead environmental agency to issue dredge-and-fill permits for proposed projects adjacent to surface water bodies, in mangrove stands, on sovereign submerged lands, or in other "waters of the state." In general, the state's jurisdiction ended at the landward extent of these waters. WMDs issued "management and storage of surface water" (MSSW) permits regulating activities in wetlands, as well as dredge-and-fill permits for projects proposed to impact isolated wetlands (not connected to surface waters) and thus outside of the state's jurisdiction at the time.

By 1979, state and WMD regulators were regularly including mitigation of adverse impacts to wetlands as a condition of these permits, although there was no statutory recognition of a statewide mitigation policy. The creation of wetlands on or adjacent to a mining or development project was the typical type of mitigation attempted.

In 1984, the Legislature passed the Warren S. Henderson Wetlands Protection Act to address property owners' concerns that wetlands permitting laws were confusing and duplicative, and regulators' and environmental advocates' concerns that the laws were ineffective. This Act consolidated the state's wetlands permitting authority and, among other things, expanded the criteria by which the state could evaluate project proposals and allow mitigation considerations.

The next significant change in wetlands permitting law occurred in 1993, when the Legislature merged the state's dredge-and-fill permitting program with the WMDs' MSSW program, to create the "Environmental Resource Permit" (ERP) program. One of the goals of the ERP program was to establish consistent wetlands regulations, including a definition of "wetlands" applicable throughout the state. DEP and four of the five WMDs operate the ERP program. A hybrid wetlands regulatory program solely within the Northwest Florida WMD is administered by DEP.

Introduction to Mitigation Banking

In the early 1990s, studies compiled by the state, the South Florida WMD, and the St. Johns River WMD showed mixed success with mitigation projects connected to wetlands permitting. Lack of compliance with the mitigation requirements, and poor siting or design of the projects were cited as common factors.

Federal and state regulatory agencies, environmental advocates and property owners began to reassess the effectiveness of on-site mitigation. In addition, there was growing interest in

regional approaches to environmental protection. A 1988 report by the National Wetlands Policy Forum recommended establishment of "mitigation banks" as a way for wetland-impact permittees to satisfy mitigation requirements.

"Mitigation banks" are parcels of land where wetlands are created, restored, enhanced, or preserved. Under the program, parcel owners (called bankers) are awarded "credits" which may be used for personal wetlands development projects, or which may be sold to other ERP applicants who must provide mitigation as a permit condition. The credits are supposed to represent the ecological value of creating, restoring, enhancing or preserving a wetland. Mitigation banks are not necessarily located adjacent to the wetlands being impacted by proposed development.

In 1991, the Florida Environmental Regulation Commission (ERC), which oversees the development of state environmental rules, created a Mitigation Banking Task Force, comprised of a cross-section of interest groups. The task force concluded that mitigation banks were a feasible and acceptable alternative, as long as the emphasis was on wetlands restoration, enhancement or preservation, and not creation.

The same 1993 legislation that created the ERP program also directed DEP and the WMDs to adopt rules, by January 1, 1994, governing the use, establishment and permitting of mitigation banks. Current state administrative rules detail the criteria for establishing a mitigation bank, the process by which mitigation credits are awarded, how a mitigation bank's service area is drawn, and each mitigation bank's financial responsibility requirements.

Before selling credits, mitigation banks must obtain a federal Mitigation Banking Instrument. In order to expedite and streamline the permitting process, mitigation bank applicants are encouraged to meet with the joint state-federal Interagency Mitigation Bank Review team. However, because state and federal mitigation regulations have differences, most crucial among them being how credits are "valued," some mitigation banks in Florida are required to keep two ledgers. One shows available credits under the state permit, and the other shows federally approved credits.

Currently, 24 mitigation banks in Florida have received state construction permits, and 6 others have received conceptual permits. An estimated 10 of the mitigation banks with state construction permits have some form of federal authorization to sell credits.

Summary of Legislative Action Taken

In 1996 and 2000, the Legislature passed laws addressing mitigation banking criteria and financing issues, partly in response to industry and WMD concerns that private mitigation banks remained at a competitive disadvantage to other public entities. The 1996 legislation clarified requirements for establishing mitigation banks. The legislation also provided that the "full cost" of a donation for mitigation work had to include land costs and administrative overhead when DEP or a WMD accepted a cash donation from a wetlands permit applicant.

Legislation passed in 2000 addressed the issue of full-cost accounting by requiring a WMD or other public entity to enter into agreements when an offsite environmental restoration project is established which will be financed by cash donations from at least five ERP applicants, or which will offset at least 35 acres of adverse impacts to wetlands. These agreements must specify the location of the project, the type of mitigation and restoration planned, how the donations or payments of money will be spent, the total costs of the project, the time frame of the project, and how the project will demonstrate mitigation success.

Recognizing the growing expense of mitigation, the legislation includes a provision allowing DEP, the WMDs and local governments to establish environmental restoration projects that do not have to comply with the full-cost accounting provisions of law. This exemption may be used to mitigate adverse wetlands impacts caused by single-family homeowners on their own property.

The legislation also responds to the problems of keeping two ledgers by directing DEP and the WMDs to develop by October 1, 2001, a uniform wetlands mitigation assessment methodology. The methodology must be adopted by rule no later than January 31, 2002. DEP and the other agencies must seek input from the U.S. Army Corps of Engineers (Corps) in order to promote consistency in the mitigation methodologies used by the federal and state agencies.

This new wetlands mitigation assessment methodology is expected to replace all other mitigation methodologies. However, agencies may develop minimum thresholds or categories of permits where minor wetlands impacts need not be subject to this functional assessment. Mitigation banks in existence prior to the adoption of the uniform methodology have the option to request credits under the new assessment.

Implementation

DEP and the WMDs are in the early stages of drafting the new functional assessment methodology, due in 18 months, and developing a basic contract for the formal agreements.

Results and Impact

Private mitigation banks have been marginally successful because of problems associated with the rigorous, dual permitting system. Over the next 2 years, major benefits are expected from using "credits" awarded by the state and the Corps using the same methodology.

As to whether full-cost accounting and other financial accountability requirements for public banks will actually level the playing field for private bankers, only time will tell. It is likely that as mitigation options increase, competition will increase. The cost of mitigation may decline for home and business development in wetland areas.

SOUTH FLORIDA ECOSYSTEM RESTORATION

Introduction

The Everglades is universally recognized for its ecological significance, but it is also an ecosystem that has been fundamentally altered and subjected to significant adverse impacts. Although the Everglades is important, there are equally significant risks to the South Florida ecosystem–for example, the Kissimmee River, Lake Okeechobee, the St. Lucie and Caloosahatchee estuaries, and Florida Bay. South Florida restoration and protection is a key component of the state's overall environmental policy.

The Central & South Florida (C&SF) Project, first authorized by Congress in 1948, is a multi-purpose project providing flood control; water supply for agricultural, municipal, and industrial use; prevention of saltwater intrusion; water supply for the Everglades National Park; and protection of fish and wildlife resources. In 1992, the U.S. Congress authorized the Comprehensive Review, or Restudy, of the C&SF Project. The purpose of the Restudy is to develop modifications to the C&SF Project to restore the Everglades and Florida Bay ecosystems while providing for other water-related needs of the region. The estimated cost of land acquisition and construction for the Restudy is $7.8 billion. In addition, annual operations and maintenance costs are estimated at $162 million, and annual monitoring costs are estimated at $10 million.

Summary of Legislative Action Taken

The 1994 Legislature passed the Everglades Forever Act (EFA) providing for a comprehensive Everglades restoration program. The critical element of the program is the Everglades Construction Project (ECP), an $800 million project involving the construction and operation of six "stormwater treatment areas" (or STAs) designed to reduce the high phosphorus runoff entering the Everglades.

Because of concerns of project cost over-runs in the ECP, the 1997 Legislature created the Joint Legislative Committee on Everglades Oversight (JLCEO) to provide better oversight and accountability of the South Florida Water Management District (District). The JLCEO has been active in legislative oversight of the ECP, and has helped maintain legislative interest and involvement in all aspects of South Florida restoration. During the 1998 Interim, the JLCEO reviewed the Restudy. The 1999 Legislature, building on the interim work of the JLCEO, passed legislation to support the District in its role as local sponsor for the Restudy, to ensure effective state oversight of projects resulting from the Restudy, and to ensure that implementation of Restudy project components is consistent with state law. In addition, the 1999 Legislature passed legislation to ensure that the stormwater treatment areas (STAs), once constructed, would be able to begin operation even in the face of a permit challenge.

In 1999, the JLCEO reviewed the Restudy to identify the amounts and timing of funding necessary to implement project components and to determine if the District would meet financial responsibilities as a local sponsor. The 2000 Legislature provided up to $1 billion in state funding over a 10-year period for the implementation of Restudy project. Also, the 2000

Legislature created a comprehensive Lake Okeechobee Protection Program and appropriated $38.5 million for projects benefiting the lake.

Implementation

A number of the STAs included in the Everglades Construction Project have been completed, largely on time and on budget. The remaining major construction project is a 16,000-acre facility scheduled for completion in 2003. Once constructed this will represent completion of Phase I of the project, which has a "design" goal of limiting the phosphorus concentration of discharges to the Everglades Protection Area to no more than 50 parts per billion (ppb). The EFA requires the state to adopt by rule a numeric criterion for allowable phosphorus concentrations of discharges. If a numeric criterion is not adopted by December 31, 2003, current law provides for a "default standard" of 10 ppb.

Supplemental technologies are to be developed for incorporation in the STAs in order to ultimately meet the numeric criterion for phosphorus concentrations in water discharged to the Everglades Protection Area. By December 31, 2003, the District must submit a permit modification to the DEP that incorporates changes necessary to achieve compliance with the numeric criterion. Presently, the District is conducting research on supplemental technologies, and the DEP has initiated a process for establishing the numeric criterion.

Funding is the most critical issue related to Phase II. Phase I is funded by state sources in the EFA, but no provisions were made for Phase II funding. Until the supplemental technologies are fully developed and proposed for incorporation into the STAs, it will be difficult to estimate the amount of funding needed, though estimates run into the hundreds of millions of dollars.

On July 1, 1999, the Restudy was completed with submission of the Comprehensive Plan to the U.S. Congress. Presently, Congress is deliberating the Water and Resources Development Act of 2000 (WRDA 2000), which includes approval of the comprehensive plan as well as authorization for 10 initial project components.

Results and Impact

The benefits of the state efforts to restore the South Florida ecosystem are expected in the near future. One initial success is that discharges from the STAs currently in operation have phosphorus concentrations well below the design parameter of 50 ppb. Past trends that have damaged the ecosystem have been reversed, and long-term programs appear to be effective.